

REMARKS

Reconsideration of the above-mentioned application in view of the amendments above and the remarks following is respectfully requested.

Claims 1–20 were pending in the application. Claims 1 -3, 9, 11, 13-15 and 17 have been amended. Claims 6- 8, 16, 19 and 20 have been canceled without prejudice. New claims 21 – 25 have been added. Support for amendments and new claims 21 to 25 can be found in the specification as filed and, for example, page 8, line 8 through page 13, line 5. No new matter is introduced by these amendments.

After claims amendments and additions, claims 1 – 5, 9 -15, 17, 18 and 21 - 25 are now pending in the application. Claims 1 and 21 are independent.

Claims Objections

Claim 16 was objected to for lacking antecedent basis for "the horizontal weld". The objection to claim 16 has been rendered moot in view of the cancellation of the claim.

Prior Art Rejection

Claims 1-4, 6-12, 16, 17 and 20 have been rejected under 35 U.S.C. § 102(b) as being anticipated by JP 07-165266

Claims 5, 13-15, 18 and 19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 07-165266.

Applicant respectfully traverses the Examiner's rejections, at least in view of the amendments to the claims. Claim 1 has now been amended to explicitly recite that the "longitudinal walls in one row are offset with respect to longitudinal walls in adjacent rows" and that "each cell in a row of cells opens to at least one cell in at least one adjacent row of cells".

The present invention provides an inflatable cellular cushioning material comprising horizontal rows of inflatable cells distributed in a brick-like pattern, i.e., the "longitudinal walls of cells in one row are offset with respect to longitudinal walls in adjacent rows" such that "each cell in a row of cells opens to at least one cell in at least one adjacent row of cells" as recited in

claim 1 of the present invention. The structure of the inflatable material provides that air can flow horizontally as well as longitudinally across the material and therefore allows the formation of individual inflated cells across both the horizontal and longitudinal dimensions of the material in a continuous manner by inflating the material and applying in a step by step operation horizontal welding at the site of inflation for sealing the individual cells.

In contrast, JP 07-165266 teaches an inflatable cushioning material which is of a completely different structure than the structure of the inflatable cushioning material of the present invention. The inflatable cushioning material of JP 07-165266 comprises a plurality of parallel elongated inflated bags (1), each of which extends substantially the entire width of the sheet, wherein each such bag has a ventilation hole (11 in the first example 1; 9, 9a in the second example) which opens into an air passage channel (7) running longitudinally along the bags. Thus, unlike the inflated product obtained by the inflatable material of the present invention, where each row comprises a plurality of closed individual inflated cells, the inflated product obtained by JP 07-165266 is not of a true individual cellular nature since it does not comprise individual inflated distributed cells across both dimensions of the material, but only across the longitudinal dimension. In this respect, Applicant would like to emphasize that a cellular cushioning material, resulting in individual cells such as provided by the present invention, is highly advantageous over a cushioning material of the type taught by JP 07-165266 since it may be cut in any direction to obtain sheets of cushioning material which are not necessarily of a rectangular shape and it minimizes deflation areas upon local injury of the material.

Applicant respectfully submits that Fig. 4 of JP 07-165266 does not show, teach or suggest a "brick-like configuration" as recited in claim 1 of the present invention. Rather, vertical weld part 8 of the embodiment depicted in figure 4 of JP 07-165266 (second example) is not configured as walls of cells in a brick-like configuration but as part of a self-sealing valve 16 as an alternative to the heat sealing taught in the first example (figures 1 -3). Applicant encloses, as Appendix A, the English abstract of the patent downloaded from the esp@cenet database from which it is clear that the translation of the numeral reference 16 (un-translated in the translation supplied by the Examiner) is a 'self-sealing valve'. Applicant further submits that upon inflation and sealing, the vertical weld part 8 does not form a separate inflated cell or cells but is an extension of cell 12, thus, the product obtained by the embodiment depicted in figure 4 of JP 07-

165266 also results in only one elongated inflated cell. Thus, the teachings of JP 07-165266 are deficient and would not lead a person of ordinary skill to the invention as claimed in the present invention.

Moreover, even if section part 8 is to be interpreted as walls of cells arranged in a brick-like configuration, part 8 does not extend the full horizontal span of the inflatable material but only for a small part thereof, while the vertical (longitudinal) walls of main cell 1 in one row are clearly not offset with respect to the walls in adjacent rows and do not open into any cell in adjacent rows. Thus, JP07-165266 does not teach or suggest that “each cell in a row of cells opens to at least one cell in at least one adjacent row of cells” as now explicitly recited in amended claim 1.

In view of the comments above with respect to independent claim 1, withdrawal of the rejections to the claims under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is respectfully requested. With respect to the dependent claims 2 to 18, withdrawal of the rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) is respectfully requested in view of the above.

New claims 21 to 25:

New claims 21 to 25 have been added. Support for amendments and new claims 21 to 25 can be found in the specification as filed and, for example, page 8, line 8 through page 13, line 5. No new matter is introduced by these amendments.

New claim 21 recites: “An inflatable cellular cushioning material comprising a sheet formed from at least two layers of plastic joined to each other at both longitudinal sides and welded to each other in a predetermined pre-welded pattern, said predetermined pre-welded pattern is configured to allow formation of horizontal rows of closed inflated cells by continuously inflating said sheet and applying horizontal sealing lines every predetermined interval along the longitudinal axis of the inflated sheet, wherein: said predetermined pre-welded pattern comprises parallel horizontal rows of longitudinal lines defining longitudinal walls of cells in a brick-like configuration such that longitudinal walls in one row are offset with respect to longitudinal walls in adjacent rows; said horizontal rows of longitudinal lines are configured such as to leave a free longitudinally extending air entry passage; and each of said horizontal rows opens into said air entry passage and each cell in a row of cells opens to at least one cell in

an at least one adjacent row of cells such that a flow of air is possible from one cell to another along the horizontal span of the inflatable cellular cushioning material.”

According to JP 07-165266, the injection of air into the bags to form the inflated cushioning material is performed only after a desired length of cushioning material is selected by sealing one end of gas hose 7 (see paragraph 10 in the translation and numeral reference 15 in figure 5). This is in sharp contrast to the present invention which allows for forming the inflated cushioning material in a continuous and automatic manner by continuously inflating the inflatable material and by “applying horizontal sealing lines every predetermined interval along the longitudinal axis of the inflated sheet”, as recited in new claim 21. JP 07-165266 also does not show, teach or suggest that “each cell in a row of cells opens to at least one cell in at least one adjacent row of cells” as now explicitly recited in new claim 21. As discussed above with respect to claim 1, the teachings of JP 07-165266 are deficient and would not lead a person of ordinary skill to the invention as claimed in the present invention.

In view of the above, applicants respectfully request that new independent claim 21, and dependent claims 22 to 25 are in condition for allowance.

Conclusion

In view of the above amendments and remarks it is respectfully submitted that all pending claims are in condition for allowance. A timely allowance of the claims is respectfully requested.

Respectfully submitted,
DAVIDSON, DAVIDSON & KAPPEL, LLC

By: 

Leslye B. Davidson
Reg. No. 38,854

Davidson, Davidson & Kappel, LLC
485 Seventh Avenue, 14th Floor
New York, New York 10018
(212) 736-1940

Appendix A:
English Abstract of JP7165266

GAS INJECTED INFLATING TYPE PAPER-MADE PACKAGE CUSHIONING MATERIAL AND PRODUCTION THEREOF

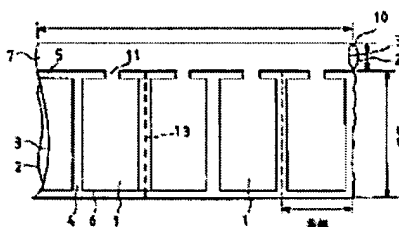
Publication number: JP7165266
Publication date: 1995-06-27
Inventor: TAKAHASHI JIRO; TAHARA YUKIO
Applicant: HITACHI DENSHI SERVICE KK
Classification:
- International: **B65D81/07; B65D81/05; (IPC1-7): B65D81/07**
- European:
Application number: JP19930310623 19931210
Priority number(s): JP19930310623 19931210

Report a data error here

Abstract of JP7165266

PURPOSE:To provide a package cushioning material which requires a small storage space, performs the cushioning function by inflating with the gas sealed therein when it is used and can be reused as waste paper after use.

CONSTITUTION:The joint required to be formed between the peripheral edges of the papers 2 and 3 having airtightness and heat fusibility when they are placed together in entirely fused together under heat and pressure except the portions to be used as ventilating hole 11 in order to make a bag into a form flat and convenient for storage. Prior to use, the bag is inflated with gas injected therein and the ventilation holes 11 are thereafter airtightly closed by heat sealing or with a self-sealing valve to seal the gas inside the bag.



Data supplied from the esp@cenet database - Worldwide